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Comments on the Illinois Power Agency's Draft Power Procurement Plan for 2012-2017 As It Relates to Clean Coal Resources and the Clean Coal Portfolio Standard

The FutureGen Industrial Alliance, Inc. ("FutureGen Alliance") submits the following comments in response to the Illinois Power Agency's Draft Power Procurement Plan for 2012-2017, which was released on August 15, 2011.

I. The FutureGen 2.0 Project Is Capable of Satisfying a Portion the IPA Act's Clean Coal Procurement Requirements.

A. FutureGen 2.0 Clearly Meets the IPA Act's Definition of A Clean Coal Facility.

Section 75 of the Illinois Power Agency Act includes a requirement that annual procurement plans include electricity generated by clean coal facilities. In addition**,** the Act expressly states that it is the goal of the State that by January 1, 2025, 25% of the electricity used in the State shall be generated by cost-effective clean coal facilities. The Act also includes a finding by the General Assembly that the "State should encourage the use of advanced clean coal technologies that capture and sequester carbon dioxide emissions to advance environmental protection goals and to demonstrate the viability of coal . . . in a carbon-constrained economy."

The IPA Act defines "clean coal facility" as "an electric generating facility that uses primarily coal as a feedstock and that captures carbon emissions" according to the following schedule:

- At least 50% of carbon emissions if construction is complete and the facility is scheduled to begin operations before 2016;
- At least 70% of carbon emissions if construction is complete the facility is scheduled to begin operations during 2016 or 2017;
- At least 90% of carbon emissions if construction is complete and the facility is scheduled to begin operations after 2017.

The IPA Act also requires that a clean coal facility must not have emissions of sulfur dioxide, nitrogen oxide, carbon monoxide, particulates, and mercury which exceed those of a similarly-sized and similarly-situated natural gas fired combined-cycle facility. Finally, the IPA Act requires that a clean coal facility must use as a feedstock coal that has a high volatile bituminous rank and greater than 1.7 pounds of sulfur per million btu content.

The FutureGen 2.0 project satisfies each and every "clean coal" requirement of the IPA Act, and then some. FutureGen 2.0 is a first-of-its-kind, near-zero emissions coal-fueled power plant. The FutureGen 2.0 project partners, in cooperation with the U.S. Department of Energy ("DOE"), will upgrade, retrofit and repower an existing fossil fuel fired electric power plant in Meredosia, Illinois with advanced oxy-combustion technology to capture approximately 1 million tons of CO_2 per year, which represents more than 90% of the plant's carbon emissions. Other emissions – including SO_2, NO_2, particulates and mercury – will be reduced to near-zero levels. Using safe and proven pipeline technology, the CO_2 will be transported and stored underground at a proposed storage site in Morgan County. The FutureGen 2.0 project will use significant amounts of Illinois No. 6 coal – mined in the Illinois coal basin – as its primary feedstock.

B. FutureGen 2.0 Fits Squarely Within the IPA Act's "Repowering and Retrofitting" Provision.

Section 75(d)(5) of the IPA Act requires the IPA and the Illinois Commerce Commission to consider power purchase agreements "covering electricity generated by power plants that were

previously owned by Illinois utilities and that have been or will be converted into clean coal facilities . . . ." Per this retrofit provision, the power purchase agreements may apply to both Illinois utilities and alternative retail electric suppliers which are subject to the IPA Act. Power purchase agreements entered into pursuant to this retrofit provision shall establish a contract price on a cost of service basis, subject to cost-based benchmarks.

FutureGen 2.0 fits neatly into the IPA Act's repowering and retrofitting provision because it involves an upgrade, retrofit and repowering of Ameren Energy Resource's ("Ameren") existing fossil fuel-fired electric power plant in Meredosia. The application of advanced oxy-combustion technology to Ameren's Meredosia power plant, combined with the capture and storage of over 90% of the CO_2 generated by the plant, will convert the plant into a qualifying, near-zero emissions clean coal facility. The plant's use of significant amounts of Illinois No. 6 coal as a feedstock also will allow it to fit in the IPA Act's definition of a clean coal facility.

Moreover, the integration of the advanced oxy-combustion technology at the Meredosia plant will help demonstrate to the world how other existing conventional coal-fired power plants can be converted into clean coal, low-emissions power generation facilities. The application of advanced oxy-combustion technology to the FutureGen 2.0 project can play a big role in paving the way for the future conversion of coal-fired power plants into clean coal plants and help preserve coal – an abundant fuel in Illinois and elsewhere in the United States and around the world – as a resource in a carbon-constrained world, which the IPA Act encourages.

II. Background and Current Status of Progress on FutureGen 2.0 Project.

In February of this year, the FutureGen Alliance selected a site in Morgan County as the preferred location for the CO_2 sequestration and storage site. The Alliance has now secured over 3,000 acres at the proposed storage site, which is more than sufficient to accommodate the

amount of CO_2 projected to be stored over a projected 30 year injection period, and will explore securing additional acreage if necessary.

Over the summer, site preparations and initial test drilling activities began at the Morgan County site. A local union contractor recently completed construction of a drilling pad which will serve as a base for drilling a geological characterization well and core samples. After the pad was completed, a crew from the Illinois State Geological Survey moved in for several days with drilling equipment to take core samples of the geology in the area. In addition, to accommodate the construction and drilling activities, the Alliance contracted with the local road district to improve and upgrade local farm access roads.

The Alliance also recently worked with various officials with the State of Illinois to complete a feasibility study to develop a pipeline route for the CO_2 pipeline. In addition, in May of this year, the DOE hosted public meetings to initiate the EIS process.

The Alliance and Ameren are also in the process of completing a detailed engineering and cost analysis for both repowering of the Meredosia site and for the proposed Morgan County pipeline and storage facility. This analysis will benefit both the Alliance and Ameren by identifying key cost drivers for the project, schedule constraints and operating parameters.

III. The FutureGen 2.0 Project Supports the IPA's Generalized Specifications for Clean Coal Candidates.

FutureGen 2.0 is supportive of the IPA's requirement that clean coal projects looking to submit a proposal demonstrate that they have made significant progress toward meeting a commercial in-service date of December 31, 2017 as outlined in the Generalized Specifications included in the draft procurement plan. We believe that by establishing these threshold criteria it

helps ensure that project sponsors have committed the necessary resources toward making their projects a reality. While many factors will ultimately decide whether a project is successful in reaching commercial operation, the proposed generalized specifications are reasonable and will assist the IPA and the Illinois Commerce Commission in determining whether any projects are cost-effective in meeting the Clean Coal Portfolio Standard requirements.

In the case of FutureGen 2.0, it is equally important that the IPA and the Commission are supportive of the re-powering and retrofitting provisions of the IPA Act. The requirement that the IPA and the Commission consider sourcing agreements from such re-powered or retrofitted plants needs to be applied to the utilities and the alternative retail electric suppliers as described in the IPA Act and that the price for electricity be established on a cost-of-service basis. We anticipate that any cost-of-service power purchase agreements with the utilities and the alternative retail electric suppliers will include both fixed and variable components, be consistent with cost-based benchmarks developed by the IPA and Commission, and subject to Commission review and approval.

IV. The FutureGen 2.0 Project Will Provide New Clean Coal Base Load Power to an Illinois Market with a Growing Appetite for Electricity.

Only one new base load power plant has gone on line in Illinois in the last decade and there are no additional base load facilities on the immediate horizon. FutureGen 2.0 will serve as a new source of up to 200 MW of base load capacity in markets – PJM and MISO – with a growing appetite for electricity. At the same time, the power supplied to the market by FutureGen 2.0 will produce only minimal emissions and, because the plant will capture and store

over 90% of the carbon emissions, the plant will stand prepared to operate in a carbon-constrained market.

The FutureGen 2.0 project will use a local and abundant resource – Illinois coal – as its primary power source. Illinois' coal industry supports over 3,000 local jobs and produces significant economic benefits and tax revenues for the state. Coal rests underneath nearly 65% of Illinois' surface. Estimated coal reserves in Illinois – 38 billion tons – represents just under 15% of the total estimated reserves for the United States. The FutureGen 2.0 project will demonstrate that this abundant resource can be used in an environmentally responsible way and will pave the way for other coal-fired base load plants, as well as the retrofitting and repowering of existing coal-fired plants.

V. The Partnership and Funding Provided by the U.S. Department of Energy Sponsorship of FutureGen 2.0 Can Set an Example for Future Retrofits and Serve as a Model for Clean Coal Going Forward.

The public-private partnership behind the FutureGen 2.0 project can serve as a model for future clean coal projects. By combining over $1 billion in federal funds from the DOE with contributions from industry made through the FutureGen Alliance, the project is able to reduce the amount of financing that must be raised from the capital markets, which should lower the overall cost of the project. Further, because of the direct contributions by the DOE and the FutureGen Alliance, the levelized cost of energy from this new base load facility should be lower than the levelized cost of energy from a new conventional base load coal plant with similar environmental attributes. In addition to demonstrating the conversion of an existing conventional coal-fired plant into a clean coal plant, the FutureGen 2.0 project will show how federal funds can be leveraged, in

partnership with private industry, to advance the development of commercial scale near-zero emissions facilities using coal. With coal based facilities providing nearly 50% of the electricity produced in this country, the importance of being able to economically repower our existing coal generation fleet in a potential carbon constrained environment will be exceedingly important.

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The FutureGen Alliance applauds the Illinois Power Agency for including a clean coal element in the 2012-2017 Procurement Plan. We look forward to participating in the upcoming procurement.

Sincerely,

Kenneth K. Humphreys
Chief Executive Officer
FutureGen Alliance